

What is claimed is:

1. A confocal scanning system comprising:
 - an excitation energy delivery system to direct energy toward a first region of a sample;
 - an optical detection system for measuring fluorescence of the sample induced by the energy;
 - a spatial filter disposed optically between the sample and the optical detection system to limit the measured fluorescence to at least one second region of the sample; and
- 10 a mechanism coupling the energy delivery system and the spatial filter to the sample so that the first and second regions scan the sample sequentially.
2. The system of claim 1 wherein the mechanism scans the first and second regions at a speed and with a distance therebetween so that the fluorescence is measured a predetermined time after the energy.
- 15 3. The system of claim 1 further comprising a plurality of spatial filters, the spatial filters comprising pinhole apertures aligned so that the fluorescence is measured at a plurality of times after the energy.
- 20 4. The system of claim 1 wherein the energy comprises laser energy.